MINIMUM REQUIREMENTS
FOR
SCANNING VIBROMETER UPGRADE

Minimum Requirements

1. The laser scanning vibrometer system shall be fully upgradeable to a 3D scanning vibrometer with simultaneous laser measurements from three directions, video camera or geometry file import for establishing scan points. 3D system scans multiple points per second.
2. The system shall have laser autofocus at specific points.
3. The system shall have motorized, remote laser focus.
4. The system shall incorporate digital velocity decoding for higher resolution and better speckle noise rejection characteristics.
5. The system shall have 40° x 40° maximum scan field for scanning large structures in tight spaces.
6. The system shall have a +/- 10 m/s maximum velocity enabling wider range of applications.
7. The system shall have a maximum vibration frequency 80 kHz available simultaneously over four input channels.
8. The system shall incorporate signal quality-based signal enhancement and laser dithering for improved data signal-to-noise.
9. The system shall have live, full-field and optically zoomable video camera used for defining scan points and displaying data.
10. The system shall have a tracking filter, selectable slow, fast and off. Very effective at reducing laser speckle noise, a physical phenomenon associated with all laser vibrometers.
11. The system shall have the ability to scan quickly over areas with greatly varying reflectivity such as dissimilar colors and edges.
12. The system shall have the availability of modular decoder boards to extend frequency response of analog output up to 30 MHz.
13. The system shall have the availability of modular decoder boards with real-time voltage output proportional to displacement.
14. The system shall have scan speed in FFT mode up to >23 points per second.
15. The system shall have heterodyne design incorporating Bragg cell.
16. The system shall have the available scan head upgrade for taking high-resolution (down to 1μm) measurements through microscope.
17. Normalization of data acquired during fast, single frequency scanning.
18. The system shall have direct support in USA from manufacturer.
19. The system shall have live color CCD video camera with remotely operated auto/manual focus zoom.
20. The system shall have 4 channel data acquisition for data manipulation, presentation and file transfer.
21. The system shall have the ability to convert files to Universal File Format(UUF).
22. The system shall have scan geometry definition software for geometry file imports, object rotation, polar, hexagonal, and Cartesian coordinate system.
23. The system shall have internal arbitrary waveform generator with the capability to generate sin, periodic chirp, pseudo fandom, burst chirp, burst random,, true random, rectangle, triangle, ramp and user-defined.
24. The system shall have a maximum output voltage of ±10V.
25. The system shall have a maximum current output of ± 5mA
26. The system shall have a maximum signal frequency of 10 kHz